Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP \_\_\_\_\_\_\_\_

CW#21H: Rotations

Honors Geometry

SWBAT rotate points 90 degrees and 180 degrees around a given center point (the origin).

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| Graph of the image of the figure using the transformation given and label the coordinates. | |
| 1. Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 12.17.08 PM.pngRotation of 90 degrees clockwise about the origin | 1. Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 12.17.18 PM.pngRotation of 90 degrees counterclockwise about the origin |
| 1. Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 12.32.33 PM.pngRotation of 180 degrees about the origin | 1. Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 12.32.37 PM.pngRotation of 180 degrees about the origin |
| Find the rule for the transformation given. Explain your reasoning in at least 1 sentence | |
| 5)  Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 12.46.57 PM.png | 6)  Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 12.47.08 PM.png |

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| Graph of the image of the figure using the transformation given and label the coordinates. | |
| 1. Rotate 90 degrees counterclockwise about the origin.   Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 12.30.45 PM.png | 1. Rotate 90 degrees clockwise about the origin.  Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 12.30.50 PM.png |
| 1. Rotate 180 degrees counterclockwise about the origin.   Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 12.31.00 PM.png | 1. Rotate 180 degrees clockwise bout the origin.   Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 12.31.05 PM.png |

SWBAT rotate points 90 degrees and 180 degrees around a given center point (the origin).

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| Graph the image of the figure using the transformation given and label the coordinates. | |
| Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 12.57.06 PM.png9) Rotate point G 90 degrees counterclockwise about the point (-1,-1) | Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 12.57.12 PM.png10) Rotate point Z 180 degrees counterclockwise abou the point (2,1) |
| Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 12.57.16 PM.png11) Rotate point W 90 degrees clockwise about the point (0,2) | Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 12.57.20 PM.png12) Rotate the point N 180 degrees clockwise about the point (-1,-1) |
| Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 1.04.16 PM.png13) Rotate the triangle 90 degrees clockwise about the point (0,-2) | Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 1.04.13 PM.png14) Rotate the quadrilateral 180 degrees about the point (0,2) |

SWBAT use properties of parallel and perpendicular lines to determine an equation of a line or coordinates of a point.

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| 15) a) Find the slope of the line segment through points A and B.  Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 1.15.47 PM.pngb) Rotate the points 90 degrees about the origin and label the new coordinates A’ and B’ c) Find the slope of the line segment through points A’ and B’ d) What is similar about the equations? What is different? | |
| Macintosh HD:Users:katleiahramos:Desktop:Screen Shot 2015-10-04 at 1.15.38 PM.png16) a) Find the slope of the line segment through points A and B.  b) Rotate the points 90 degrees about the origin and label the new coordinates A’ and B’ c) Find the slope of the line segment through points A’ and B’ d) What is similar about the equations? What is different? | |
| Perpendicular lines:   * Have slopes that are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ of each other. Example: * \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ intersect      * Always rotated by \_\_\_\_\_\_\_\_\_\_\_\_ degrees | |
| 17) Determine whether or not the following lines are perpendicular to . Explain why or why not.  a)   b)  c)   d) | |
| 17) Suppose *f(x)* = 2x + 1. Create an equation for the function *h(x)* if *h(x)* is perpendicular to *f(x)*  and goes through the point (1,1) | 18) Suppose *f(x)* = -0.5x + 6. Create an equation for the function *h(x)* if *h(x)* is perpendicular to *f(x)*  and goes through the point (-2,-3). |